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I HEREBY CERTIFY THAT THIS CORRESPONDENCE IS BEING DEPOSITED WITH THE U.S. POSTAL SERVICE AS FIRST CLASS MAIL IN AN ENVELOPE ADDRESSED TO: MAIL STOP AMENDMENT, COMMISSIONER FOR PATENTS,

P.O, BDX 1450, ALEXANDRIA, VA 22313-1450

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# IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants

SIGNATURE

Yun Luo et al.

Serial No.

10/785,278

Filing Date

February 24, 2004

For :

METHOD AND APPARATUS FOR ARBITRATING OUTPUTS FROM MULTIPLE PATTERN RECOGNITION CLASSIFIERS

Art Unit '

3616

Examiner

TBD

**Attorney Docket** 

TRW(TE)6896

Mail Stop Amendment Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

### INFORMATION DISCLOSURE STATEMENT

#### Sir:

- 1. Pursuant to 37 CFR §1.97 and §1.98, and in compliance with CFR §1.56, the Office's attention is directed to the patents, pending applications, publications and other information listed on the attached PTO-1449. Applicant(s) make no admission that the documents are prior art to the present invention.
- 2. Regarding each listed document that is not in the English language, an English-language translation accompanies this Statement as indicated on the attached PTO-1449 or a corresponding U.S. Patent is enclosed, or an English abstract, or a concise explanation of the relevance of the document is set forth on an attached sheet.

3.	Pursuant to 37 CFR §1.97(b) this Statement is being filed (one must be checked):								
	(a)				months of the filing date or into the National Stage.				
	(b)	$\boxtimes$	Before the mailing date of a first Office Action on the merits.						
	(c)	C .	After the period set forth in 37 CFR §1.97(b) but before the mailing date of either a final action or a notice of allowance or an action that otherwise closes prosecution in the application.						
			1)		A certification is given below,				
			2)		Enclosed is a check covering the fee (\$180.00) set forth in §1.17(p) for consideration of this Statement, or				
			3)		Charge the fee set forth in 37 CFR §1.17(p) to Deposit Account No. 20-0090.				
	(d)		final a	action o	iling date of either a or a notice of allowance, but before payment fee. The required certification and fee is low.				
			1)		Enclosed is a check covering the fee set forth in 37 CFR §1.17(p) \$180, or				
			2)		Charge the fee set forth in 37 CFR §1.17(p) to Deposit Account No. 20-0090.				
4.	Certification (if applicable):								
	(a) The undersigned hereby certifies that each item of information contained in this Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Statement								

(b)	The undersigned hereby certifies that
	no item of information contained in this Statement was
	cited in a communication from a foreign patent office in a
	counterpart foreign application, and, to the undersigned's
	knowledge after making reasonable inquiry no item of
	information contained in the Statement, was known to
	any individual designated in 37 CFR §1.56(c) more than
	three months prior to the filing of this Statement.

- 5. The Commissioner is hereby authorized to charge any additional fees, fees underpaid, or credit any overpayment with regard to this Statement to Deposit Account No. 20-0090.
- 6. Concise Explanation (if needed):
  - (1) Below is a Concise Statement of Relevance of enclosed non-English language document(s).

#### **U.S. PATENT DOCUMENTS**

U.S. Patent Application Pub. No. US 2003/0209893 A1

#### OTHER DOCUMENTS

Phetkaew et al., "Reordering Adaptive Directed Acyclic Graphs: An Improved Algorithm for Multiclass Support Vector Machines", *Journal of Advanced Computational Intelligence and Intelligent Informatics*, Vol. 7, No. 3, 2003, XP002386455.

Lachiche et al., "Improving Accuracy and Cost of Two-Class and Multi-Class Probabilistic Classifiers Using ROC Curves", *International Conference on Machine Learning*, 2003, XP002386456.

Pratt, "Digital Image Processing", 2001, Wiley Interscience, New York, XP002386466.

Tax et al., "Using Two-Class Classifiers for Multiclass Classification", *IEEE Comput. Soc., US*, Vol. 2, 11 August 2002 (2002-08-11) pages 124-127, XP010613836.

Fürnkranz. "Pairwise Classification as an Ensemble Technique", *IN:* European Conference on Machine Learning (ECML)., 2002, XP002386457.

## **OTHER DOCUMENTS**

Cortes et al., "Support-Vector Networks", *Machine Learning*, Vol. 20, 1995, Pages 273-297, XP002386458.

Otsu. "A Threshold Selection Method from Gray-Level Histograms", *IEEE Transactions on Systems, Man and Cybernetics*, Vol. 9, No. 1, 1979, pages 62-66, XP002386459.

Respectfully submitted,

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(Use several sheets if necessary)			FILING DA	TE: February 24,	GROUP: 3616						
U.S. PATENT DOCUMENTS											
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		OTHER DOCUMENTS (II									
	1	Phetkaew et al., "Reordering Adaptive Directed Acyclic Graphs: An Improved Algorithm for Multiclass Support Vector Machines", <i>Journal of Advanced Computational Intelligence and Intelligent Informatics</i> , Vol. 7, No. 3, 2003, XP002386455.									
	J	Lachiche et al., "Improving Accuracy and Cost of Two-Class and Multi-Class Probabilistic Classifiers Using ROC Curves", <i>International Conference on Machine Learning</i> , 2003, XP002386456.									
	K	Pratt, "Digital Image Processing", 2001, Wiley Interscience, New York, XP002386466.									
	L	Tax et al., "Using Two-Class Classifiers for Multiclass Classification", <i>IEEE Comput. Soc., US</i> , Vol. 2, 11 August 2002 (2002-08-11) pages 124-127, XP010613836.									
	М	Fürnkranz. "Pairwise Classification as an Ensemble Technique", <i>IN: European Conference on Machine Learning (ECML).</i> , 2002, XP002386457.									
	N	Cortes et al., "Support-Vector Networks", <i>Machine Learning</i> , Vol. 20, 1995, Pages 273-297, XP002386458.									
	0	Otsu. "A Threshold Selection Method from Gray-Level Histograms", <i>IEEE</i> O <i>Transactions on Systems, Man and Cybernetics</i> , Vol. 9, No. 1, 1979, pages 62-66, XP002386459.									
EXAMINER					DATE CONSI	DERED					

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP §609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to the patent applicants' attorney.